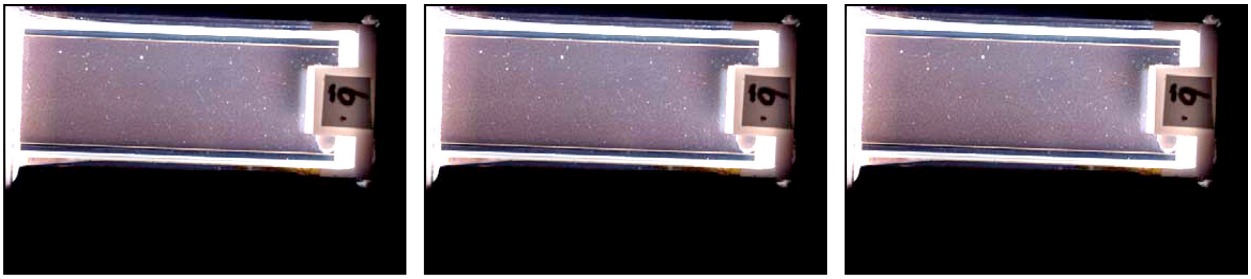
ISS and Human Research Project Office Highlights
November 13, 2009

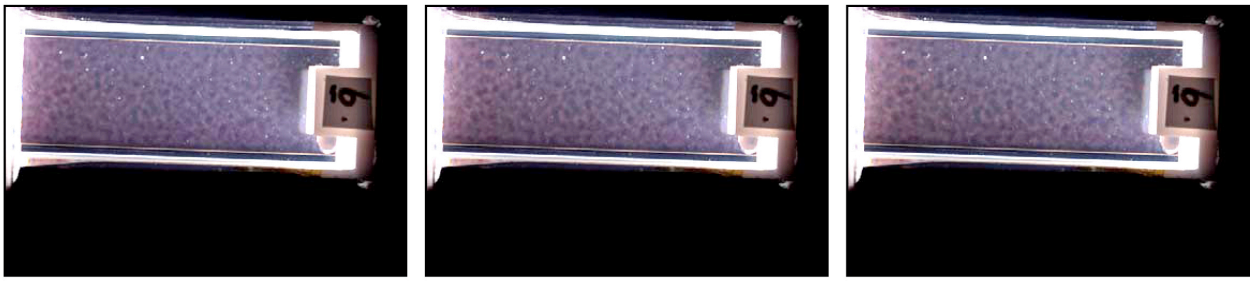
ISS Research Program

BCAT-5 operations move to JAXA Kibo Module

The Binary Colloidal Alloy Test-5 was reinitialized in the JAXA Kibo Module and is producing exciting science data for the research team at Simon Fraser University (SFU) sponsored by the Canadian Space Agency (CSA). This sample demonstrates the competition between phase separation (coarsening) and the formation of crystals. Knowledge of this process is important to the plastics industry. When the effects of gravity are removed the process slows down to the point that it can be observed by time elapsed photography. (POC: MAH/Donna Bohman, (216) 433-8860), MAH/Ron Sicker (216) 433-6498)



Sample 6 near beginning of experiment



Sample 6 after approximately eight hours.
CSA Sample 6 has successfully captured the phase separation event

BCAT-5 experimental setup in the JAXA Kibo Module on November 9, 2009

FIR and CIR operating simultaneously on ISS.
Both Fluids and Combustion Facility (FCF) racks on the ISS, Combustion Integrated Rack (CIR) and the Fluids Integrated Rack (FIR), had ISS operations this past week. The ISS operations occurred at the same time, which was the first time for simultaneous rack operations for CIR and FIR with support at GRC's Telescience Support Center. The CIR was activated and perform four good droplet deployments and burns. All the science data was downloaded to the Telescience Support Center for processing. The ISS crew also continued outfitting operations on the FIR. The crew started the install of the Light Microscopy Module to bring the FIR/LMM closer to activation. It is anticipated that final install of the LMM will occur within the next few weeks. (POC: MAH/Robert Corban, (216) 433-6642)

Proposals arriving for NASA's DIME and WING program.
NASA's Dropping In a Microgravity Environment, or DIME, challenges students in high school to design and build an experiment to be conducted in NASA Glenn's 2.2 second drop tower. A new addition to DIME is the *What If No Gravity?* or WING program. WING challenges students in grades 6-9 to build a experiment (although it is recognized these experiments may be more simple than those proposed for DIME), construct and test the experiment at their school or home location, and then send the experiment to NASA Glenn to also be dropped in the 2.2 Second Drop Tower. Proposals were due on November 2, 2009 and as of November 6, 2009, 29 proposals were received, 17 for WING and 12 for DIME. The proposals submitted came from coast-to-coast with both east-west and north-south representation. The next step for the program is the the 'blind' evaluation of each proposal by NASA and to have the selections announced by mid-December. For more info about the DIME program, see: http://spaceflightsystems.grc.nasa.gov/DIME.html. (POC: MAH/Nancy R. Hall, (216) 433-5643)